CLAIMS

What is claimed is:

1) A computer system operation method for use with a CAD system in modeling objects, the method comprising:
displaying a representation of an object;
receiving input from a user specifying the attachment of one or more graphic tools to said object, said graphic tools each representing a command function for modifying the geometry of the object;
displaying said one or more graphic tools attached to said representation of said object, wherein each of said graphic tools is concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify the geometry of the object.

2) The computer system operation method of claim 1, wherein the method further comprises:
receiving input from a user specifying that one or more command functions be executed automatically upon modification of the geometry to which said command function is attached; and
executing said one or more command functions designated for automatic execution upon modification of the geometry to which it is attached.

3) The computer system operation method of claim 1, wherein the method further comprises:
receiving input from a user specifying that the system operation be suspended;
saving the geometry and inputs received by the user immediately prior to receiving said suspension input from the user;
suspending operation of the system;
receiving input from the user that the system resume operation;
retrieving said stored geometry and inputs; and

resuming operation of said system using said stored information.

4) The computer system operation method of claim 1, wherein the method further comprises:
receiving input from a user specifying that the user interface, comprising commands for modifying the geometry of said object, be saved; and
saving said user interface as it exists at the time said saving input is received.

5) The computer system operation method of claim 4, wherein the method further comprises:
receiving input from a user specifying that a previously saved user interface be retrieved;
retrieving said user interface;
receiving user input specifying that said user interface be applied to an object selected by the user; and
applying said user interface to said object selected by the user.

6) The computer system operation method of claim 1, wherein the method further comprises:
modifying the display of said one or more graphic tools whenever the object to which it is attached is modified.

7) A CAD/CAM apparatus comprising:
an input device;
a central processing unit; and
a display device;
wherein the central processing unit runs an application program comprising code for:
displaying a representation of an object;

receiving user input specifying the placement on said object of at least one graphical tool representing a command function for modifying the geometry of the object;

displaying said at least one graphical tool in response to said input;

receiving input from a user modifying one of said graphical tools; and

modifying the geometry of said object in accordance with the command function associated with the graphical tool, wherein each of said graphical tools is concurrently active on said geometry.

8) The CAD/CAM apparatus of claim 7, wherein the application program further comprises code for:

receiving input from a user specifying that one or more command functions be executed automatically upon modification of the geometry to which said command function is attached; and

executing said one or more command functions designated for automatic execution upon modification of the geometry to which it is attached.

9) The CAD/CAM apparatus of claim 7, wherein the application program further comprises code for:

receiving input from a user specifying that the system operation be suspended;

saving the geometry and inputs received by the user immediately prior to receiving said suspension input from the user;

suspending operation of the system;

receiving input from the user that the system resume operation;

retrieving said stored geometry and inputs; and

resuming operation of said system using said stored information.

10) A computer data signal embodied in a digital data stream comprising data representing the physical configuration of an object, and data representing a plurality of graphic tools coupled to said object, said graphic tools each representing a command function for modifying the geometry of the object,

wherein said data stream is generated by a system operating according to a method comprising:

receiving input from a user specifying the attachment of one or more graphic tools to said object;

displaying said one or more graphic tools attached to said representation of said object, and

maintaining each of said graphic tools as concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify the geometry of the object.

11) The computer data signal embodied in a digital data stream of claim 10, wherein said system operates according to a method further comprising:

receiving input from a user specifying that one or more command functions be executed automatically upon modification of the geometry to which said command function is attached; and

executing said one or more command functions designated for automatic execution upon modification of the geometry to which it is attached.

12) The computer data signal embodied in a digital data stream of claim 10, wherein said system operates according to a method further comprising:

receiving input from a user specifying that the system operation be suspended;

saving the geometry and inputs received by the user immediately prior to receiving said suspension input from the user;

suspending operation of the system;

receiving input from the user that the system resume operation;

retrieving said stored geometry and inputs; and

resuming operation of said system using said stored information.

13) Computer executable code stored on a computer readable medium, the code comprising means for causing a computer to take steps comprising:

displaying a representation of an object;

receiving input from a user specifying the attachment of one or more graphic tools to said object, said graphic tools each representing a command function for modifying the geometry of the object;

displaying said one or more graphic tools attached to said representation of said object, wherein each of said graphic tools is concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify the geometry of the object.

14) Computer executable code stored on a computer readable medium according to claim 13, said code further comprising means for causing a computer to take steps comprising:

receiving input from a user specifying that one or more command functions be executed automatically upon modification of the geometry to which said command function is attached; and

executing said one or more command functions designated for automatic execution upon modification of the geometry to which it is attached.

15) Computer executable code stored on a computer readable medium according to claim 13, said code further comprising means for causing a computer to take steps comprising:

receiving input from a user specifying that the system operation be suspended;

saving the geometry and inputs received by the user immediately prior to receiving said suspension input from the user;

suspending operation of the system;

receiving input from the user that the system resume operation;

retrieving said stored geometry and inputs; and

resuming operation of said system using said stored information.

16) A computer system operation method for use with a CAD system in modeling objects, the method comprising:

displaying a representation of an object;

receiving input from a user specifying the attachment of one or more graphic tools to a portion of said object, said graphic tools each representing a command function for modifying the geometry of the object;

displaying said one or more graphic tools attached to said portion of said object, wherein each of said graphic tools is concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify said portion of the geometry of the object.

17) A CAD/CAM apparatus comprising:

an input device;

a central processing unit; and

a display device;

wherein the central processing unit runs an application program comprising code for:

displaying a representation of an object;

receiving user input specifying the placement of at least one graphical tool, representing a command function for modifying the geometry of the object, on a portion of said object;

displaying said at least one graphical tool in response to said input;

receiving input from a user modifying one of said graphical tools; and

modifying said portion of the geometry of said object in accordance with the command function associated with the graphical tool, wherein each of said graphical tools is concurrently active on said portion of said geometry.

18) A computer data signal embodied in a digital data stream comprising data representing the physical configuration of an object, and data representing a plurality of graphic tools coupled to a portion of said object, said graphic tools each representing a command function for modifying the geometry of the object, wherein said data stream is generated by a system operating according to a method comprising:

receiving input from a user specifying the attachment of one or more graphic tools to a portion of said object;

displaying said one or more graphic tools attached to said portion of said object; and

maintaining each of said graphic tools as concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify said portion of the geometry of the object.

19) Computer executable code stored on a computer readable medium, the code comprising means for causing a computer to take steps comprising:

displaying a representation of an object;

receiving input from a user specifying the attachment of one or more graphic tools to a portion of said object, said graphic tools each representing a command function for modifying the geometry of the object; and

displaying said one or more graphic tools attached to said portion of said object, wherein each of said graphic tools is concurrently active, so that modification of any of said graphic tools by the user will cause its associated command function to modify said portion of the geometry of the object.